

REMARKS

The applicant respectfully requests reconsideration in view of the amendments and the following remarks. Support for amended claim 23 can be found on the last line at page 2 of the specification. Experimental support for said modification is provided by examples 1, 2, 3, 5, 6, 7, 8, 9 and 10. As can be taken from the corresponding analytical data, the reaction products obtained according to the present invention are characterized by very high proportions of incompletely acrylated products. The proportion of completely acrylated products as for example glycerol triacrylate is in each instance very low, and particular below 3 % or even lower. The applicant has cancelled the non-elected claims. Support for amended claim 26 can be found in the specification at page 5, line 24. Support for newly added claims 46 can be found in claim 25. Support for newly added claim 47 can be found in the examples. Support for newly added claim 48 can be found in claim 23 and in the examples (for example, see in particular examples 2 and 3). No additional fee is required for the three extra claims added since three claims were cancelled.

Claims 23, 38, 40 and 41 were rejected under 35 U.S.C. 112, second paragraph. Claims 29, 37 and 38 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 23, 24, 26-33, 35-38, 40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown U.S. Patent No. 5,288,619 (Brown). Claims 23-38, 40, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown as applied to 23, 24, 26-33, 35-38, 40 and 41 above and in further view of the following rationale. Claims 23-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown as applied to claims 23-38, 40, 41 and

42 above, and further in view of U.S. Patent No. 5,240,835 (Pettrone) and U.S. Patent No. 5,009,805 (Perner). The applicant respectfully traverses these rejections.

35 U.S.C. 112, Second Paragraph Rejection

Claims 23, 38, 40 and 41 were rejected under 35 U.S.C. 112, second paragraph. Claims 29, 37 and 38 were rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant believes that the claims as amended are in compliance with 35 U.S.C. 112 second paragraph. For the above reasons, this rejection should be withdrawn.

Prior Art Rejections

Claims 23, 24, 26-33, 35-38, 40 and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown. Claims 23-38, 40, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown as applied to 23, 24, 26-33, 35-38, 40 and 41 above and in further view of the following rational. Claims 23-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown as applied to claims 23-38, 40, 41 and 42 above, and further in view of Pettrone and Perner.

The present invention specifically aims at the preparation of such incompletely (partially) acrylated polyols which, as explained on the bottom of page 2 to the top of page 3 of the application and are of specific value in preparing dual-cure systems, i.e. polymer systems which are radiation-curable, and, in addition, thermally curable. Such systems are of particular advantage in view of the very low proportion of remaining extractable constituents. This

particular advantage is further illustrated by comparative example 1 (i.e. example 4) which illustrates that by conventional methods the proportion of total extractables after radiation curing and thermal curing is much higher (33 or 47 % by weight) if compared to the content of extractables observed according to the present invention (see for example proportions of less than 5 % obtained according to examples 3a and 3b of the present invention) (see claim 47).

None of said prior art documents as cited in the office action teach or suggest to prepare such incompletely (partially) acrylated polyols which may be used for preparing improved dual-cure systems as illustrated by the present invention.

The applicant believes that Brown is not relevant at all for evaluating patentability of the present invention. Brown does not relate to the technical field of preparing further polymerizable acrylated polyols and, in particular, does not address the problem of specifically preparing incompletely acrylated polyols by means of enzymes. To the contrary, as can be taken from the abstract or from claim 1 of Brown one mandatory step of the enzymatic transesterification method is the hydrogenation of the obtained fatty acid mixture. In other words, the product obtained according to Brown is hydrogenated, i.e. no longer applicable as polymerizable polyol, as C=C bounds have been hydrogenated.

The additional disclosure of Pettrone does not provide further guidance to a person of ordinary skill in the art. Again, Pettrone teaches away from the present invention. As can be taken from column 2, lines 50 to 52, the enzymatic conversion reaction as disclosed by Pettrone is based on the enzyme activity of a transacylases enzyme. Transacylases, however, belong to the enzyme class E.C.2.3.1 while hydrolases as used according to the present invention belong to the class E.C. 3. Therefore, the teaching of Pettrone is based on the use of a biocatalyst residing on a completely different enzymatic mechanism, i.e. transfer of acyl groups rather than hydrolytic

activity as required according to the present invention. Finally, a person of ordinary skill in the art would not be motivated by the teaching of Pettrone to provide the claimed method of the invention because Pettrone does not specifically address the problem of preparing incompletely(partially) acrylated polyols which are of specific advantage in preparing dual-cure systems (characterized by a surprisingly low content of extractables). Finally, the teaching of Pettrone does not at all address the enzymatic preparation of incompletely acrylated polyols.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

A three month extension fee has been paid. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13111-00021-US from which the undersigned is authorized to draw.

Dated: September 4, 2008

Respectfully submitted,

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